



THE NATURAL HISTORY MUSEUM

Earth Quest

MINIMUM SYSTEM REQUIREMENTS WINDOWS®

Operating System	Windows®3.1x/95
CPU	486DX/33MHz
RAM	8Mb (12Mb recommended)
Screen display	640 x 480 pixels 256 colours (16-bit colours preferred)
CD-ROM speed	double-speed
Available space on hard drive	13Mb
Audio	8-bit sound card *
Other	loudspeakers or headphones, mouse. To access Science Online, the online feature in this product, you will need Internet access.

* This product will not run without a sound card

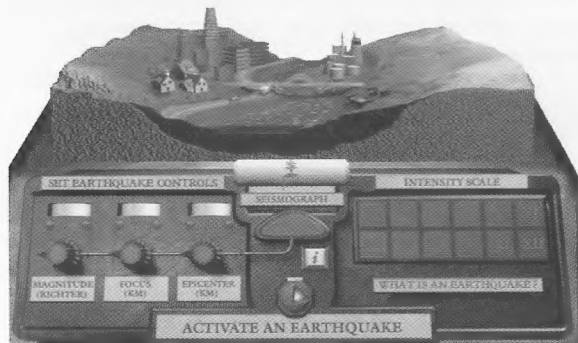
The ultimate interactive guide to the forces and forms of our dynamic planet

EYEWITNESS



EARTHQUAKE IMPACT

What would it be like living in an earthquake zone? You may have friends or know children at school who have lived in an earthquake zone who will recount that it is not as scary as it seems. Children could write a short story describing how they feel about the threat of an imminent earthquake.



QUAKE-PROOF MODELS

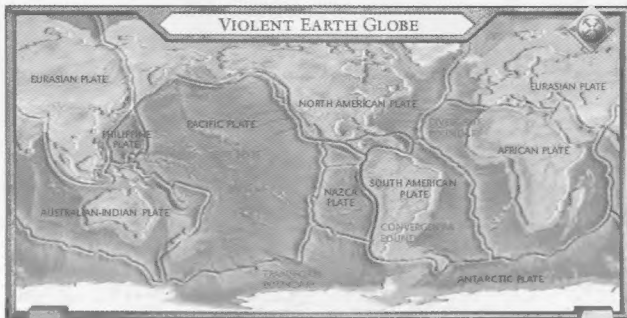
People who live in earthquake zones develop earthquake-proof building techniques. In early Japan, houses were made of paper as these were easy to replace after earthquake devastation. In cities such as San Francisco

and Mexico City, some modern buildings have been erected on enormous springs. Ask children to design their own quake-proof buildings. They would need to devise a way of testing models fairly. They could start by testing different brick bonds using children's building blocks. Which are the strongest and most stable? Good designs could be sent to the Online site for others to try out.

PLATE JIGSAW

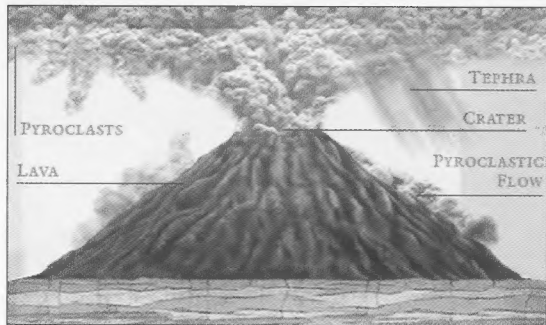
The reward for the Earth Builder challenge is an animation showing the fragmentation of the great landmass Pangaea into the present continents.

Children could cut out photocopies of a world map and piece them together as they would have lain in Pangaea. The results will be even more convincing if students can cut around the edges of the continental shelves rather than the land itself. They could use their jigsaw to predict what the world will look like in 200 million years' time.



EROSION AND WEATHERING

Using the CD-ROM, children can research how different landscapes are formed, and present their findings to the class or family. When students have considered how landscapes are eroded and weathered, they could look at the buildings in their locality and see how they are weathered. How do we protect our buildings from weathering? Children could draw an annotated picture of their home, indicating features that prevent weathering, e.g., use of paint on wood, use of plastic, design of building (overhanging eaves, etc).



PLOTTING VOLCANOES

Plotting their own map of volcanoes will help children to become more aware of the location of the edges of the tectonic plates. Alternatively, students could build up the volcanoes on a globe using modelling putty.

MAKE A VOLCANO

Half fill a small plastic bottle with bicarbonate of soda. Put the bottle in a pie dish or baking dish with raised sides. Surround it with gravel or sand so that it looks like a volcano, but keep the neck of the bottle uncovered. Mix some vinegar with red food colouring to make it look like lava, and pour it into the bottle. The vinegar will react with the bicarbonate of soda to release carbon dioxide which will “erupt” out of the mouth of the “volcano”.

CONSTRUCTION MATERIALS

Children can collect pieces of building material and work out which are made from naturally occurring materials and which are manufactured. They could consider which natural materials could be substituted for the manufactured ones and where the resources would come from.



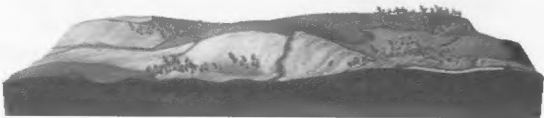
THE ROCK CYCLE

Most children are familiar with the water cycle: water evaporates, condenses into clouds, which turn into rain that descends back to Earth. The rock cycle is a similar dynamic taking place over a far longer time scale. Ask children to find out how mountains are formed and eroded by wind and water, and how sedimentary rocks are

formed, go back into the mantle and finally resurface. They could present these complex processes in a simple annotated poster.

MODELS

Ask children to model a landscape using clay, papier mâché or junk materials and annotate it to explain the processes.



CONTOURS

Building a model of a hill using layers of thick sheet material such as corrugated card can help children to understand contour lines. The hill will look like a series of steps. To show how contours are made, draw around the largest area. Inside this, draw the next largest and inside this the next, and so on, until you reach the summit. Children should then be able to see that contour lines on a map join all the points of the same height and that the closer together they are, the steeper the slope is.

TO FIND OUT MORE ABOUT THE EARTH, CONSULT THE FOLLOWING SOURCES:

Picturepedia

The Earth

DK Picture Atlases

The Earth Atlas

The Oceans Atlas

Eyewitness Guides

Rock & Mineral

Fossil

Crystal & Gem

Volcano

Inside Guides

Incredible Earth

DK Pockets

Earth Facts

Fossils

Rocks & Minerals

Eyewitness Visual Dictionaries

The Visual Dictionary of the Earth

The Eyewitness Atlas of the World

The Dorling Kindersley Science

Encyclopedia

Dictionary of the Earth John

Farndon

Quizmaster

Earth

Eyewitness Science Guides

How the Earth Works

DORLING KINDERSLEY

VISION

Eyewitness Videos

Rock & Mineral

Volcano

First published in Great Britain in 1997 by Dorling Kindersley Ltd.


















9 Henrietta Street
London WC2E 8PS

Copyright © 1997 Dorling Kindersley Ltd.

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without prior permission of the copyright owner.

ISBN 0-7513-9557-9

OTHER DORLING KINDERSLEY CD-ROMs

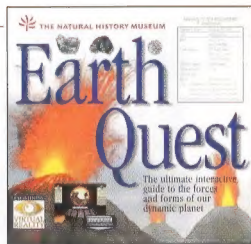
-  My First Dictionary
-  My First Amazing World Explorer 2.0
-  Encyclopedia of Nature 2.0
-  Encyclopedia of Science 2.0
-  Encyclopedia of Space and the Universe
-  History of the World 2.0
-  Ultimate Human Body 2.0
-  Atlas of the Solar System
-  20th Century Day by Day
-  Eyewitness: World Atlas
-  Chronicle Encyclopedia of History
-  Children's Encyclopedia
-  DK: Children's Dictionary
-  The New Way Things Work
-  Amazing Animals
-  My Amazing Human Body
-  Castle Explorer

For further information on Dorling Kindersley publications visit
<http://www.dk.com>



IDEAS AND ACTIVITIES FOR PARENTS AND TEACHERS

The Eyewitness Virtual Reality series of CD-ROMs is based on the enormously successful *Eyewitness Guides*. It employs the metaphor of a natural history museum in which each subject forms one floor. As you travel through the chambers of the *Eyewitness Virtual Reality Earth Quest* CD-ROM, lava bubbles under grates beneath your feet, fiery lights flicker in the distance, and ambient drips echo around you...You can discover how a canyon is formed, set off an earthquake and even experience the effects of the fourth dimension - time.



The Eyewitness Virtual Reality *Earth Quest* CD-ROM challenges children aged 10 and upwards to solve the tectonic plate puzzle and rebuild the Earth by collecting minerals hidden in the museum. They can then travel back in time to visit locations millions of years ago...

CONTENTS

How to get started.....	3
Introduction.....	4
The Main Areas of the Museum / The Earth Gallery.....	5
Violent Earth.....	6
Shaping the Earth / Mining.....	7
Moving around the Museum.....	8
National Curriculum / Your starter for ten.....	9
Online connection / Earthquake impact / Quake-proof models.....	10
Plate Jigsaw / Erosion and Weathering.....	11
Plotting Volcanoes / Make a Volcano / Construction materials.....	12
The Rock Cycle / Models / Contours.....	13
Further information.....	14/15

If you experience problems with your Earth Quest CD-ROM,
please contact the Diskxpress helpline by telephone
(Monday-Friday 9am-5pm) on 01451 810788 (UK);
00 44 1451 810788 (Eire); or by e-mail: helpline@diskxpress.com



Earth Quest



★ HOW TO GET STARTED ★

USING YOUR PC

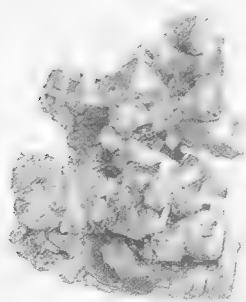
1. Insert the disc in the CD-ROM drive.
2. Windows® 95/98 users: the Setup program should start automatically. If it does, skip to step 5. If it does not, press **Ctrl + Esc**, then **R**, and go to step 4.
3. Other users: open the Windows® Program Manager, and choose **Run** from the **File** menu.
4. In the Command Line box, type **d:\setup** (where **d** is the letter of your CD-ROM drive), then click **OK** or press **ENTER**.
5. Follow the instructions that appear on your screen.
6. When the computer restarts, double-click on **My Computer**, then double-click on the **Dkearth (D:)** icon. Click on **Yes** to run the program. (OR, run the game through the Start menu: click on Programs, then DK Multimedia, then Earth Quest.)

USING YOUR MACINTOSH

1. Insert the disc in the CD-ROM drive.
2. You can run the title directly from the CD-ROM simply by double-clicking on the **Earth Quest** icon.
3. For improved performance, you can install certain files on your hard disk. To do this, drag the **Earth Quest** folder to your hard disk. Open the folder and double-click on the **Earth Quest** icon.
4. If you experience any problems, double-click on the **Readme** icon.



EARTH QUEST CD-ROM



Step into the rocky chambers of this new floor of the *Eyewitness Virtual Reality* Museum and uncover the secrets of our continuously changing planet. In the *Eyewitness Virtual Reality Earth Quest* CD-ROM, not only can you interact with the 3D environment by, for instance, setting off an earthquake or creating your own model of a volcano, you can also experience the effects of the fourth dimension - time. The vast scale of geological time is accelerated to allow you to witness minerals change and develop during your visit.

This booklet describes the layout of the museum and introduces its special features. It also suggests on- and off-screen activities, some of which are linked to the National Curriculum, to help children to get the most out of the *Eyewitness Virtual Reality Earth Quest* CD-ROM.

THE MAIN AREAS OF THE MUSEUM

Once the disc is installed, click on the Earth icon and, after the Eyewitness introductory video sequence, the title screen will appear. Click on the eye and you will find yourself standing in the Lobby facing the **Earth Gallery**. (There are three other main areas: **Violent Earth**, **Shaping the Earth**, and **Mining**. Click on the **i** symbol for detailed instructions at each stage.)

THE EARTH GALLERY

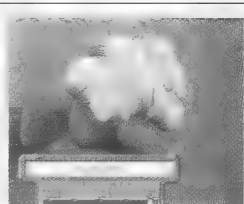


The walls of the Earth Gallery are lined with exhibits of different rocks and minerals, crystals and gems, grouped according to their chemical composition. You can examine and compare any of the samples.

The Earth Builder challenge

Here you can unlock the 17 plates that make up the Earth's outer layer to rebuild the Earth's surface. To unlock each plate, you have to search the museum for the answers to the two questions and collect a mineral sample. Once all 17 plates are in place, you can travel back in

time to visit familiar places in unfamiliar circumstances, e.g., south-eastern England 200 million years ago.



Growing minerals

As you enter the museum a timer starts. When you hear a signal sound, it means one of the 17 minerals located in the time zones in the entrances of the tunnels leading off the Earth Gallery is about to grow. By clicking on the small navigator, you will be taken there immediately.

Rocks and Minerals console

This is divided into four sections: What is a rock?, Inside a crystal, What is a mineral?, and What is a gemstone?

Violent Earth

To reach this 3D volcano and earthquake zone, head west from the Earth Gallery along a dark passageway until you see a fiery glow - your first glimpse of the volcano ahead.

The Violent Earth globe

This shows some of the tectonic plates that make up the Earth's surface with examples of geologic activity along their edges. Famous volcanoes and earthquakes are described, and a controllable display shows the location of all the volcanic and earthquake activity around the world since 1960.



Volcano console

Here you can create and erupt six types of volcano; bisect a volcano to discover what makes it erupt; and watch videos showing lava and ash eruptions, hot springs, and pillow lava.

Earthquake console

Here you can witness destruction caused by earthquakes; view animations of seismic waves; and watch videos showing footage from real-life or reconstructions of earthquakes.

SHAPING THE EARTH

Go east from the Earth Gallery into a 3D landscape ranging from jagged mountain peaks to dry, rocky desert.



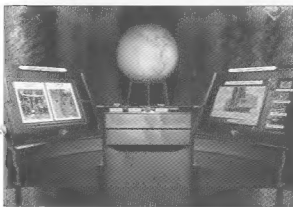
Origins of the Earth globe

This exhibit has four animations which tell the story of the Earth: the birth of the solar system; how sedimentary rocks and fossils are formed; the movement of the Earth's major tectonic plates; and how the Earth's layered structure (crust, mantle and core) formed.

Shaping the Earth

This interactive console shows eight 3D landscapes: mountains, alpine valley, hills, canyon, desert, rift valley, coastline, and a volcanic island. The console explains how these landscapes were formed by folding, glaciers, rain, rivers, wind, waves, volcanic action and faulting.

MINING



Go north from the Earth Gallery to gain access to the mining console.

The Resources globe

This multifunctional globe spins and flattens out into a world map that shows where the largest deposits of metals, gemstones, and fossil fuels are found. There is also information on how long resources will last, and on alternative energy sources. The comprehensive index allows you to search for specific resources.

Mines and Mining

What is Mining? and Stages of Mining explain the process of mining, related economic factors, and the impact of mining on the environment.

Mining in Action

This shows videos of four different types of mining: drilling and blasting; open pit mining; underground mining; and the Bingham Canyon mine.

GETTING THE MOST OUT OF YOUR CD-ROM



One major advantage of the Virtual Reality Museum over a real museum is that children can visit as often and for as long as they wish. They can browse around the exhibits and interactive consoles or use the indexes and cross-references to obtain information for projects.

MOVING AROUND THE MUSEUM

Moving the cursor to the left, right, or straight ahead will cause it to change into a blocked arrow. Clicking on the blocked arrow will take you in the direction indicated, presenting a new vista. Click on the “eye” cursor to zoom in closer to an exhibit and, for further information, click on the pointing finger.

To find out where you are in the museum, click on the eye in the centre of the **Navigator** and a small locator map of the museum will appear. A red dot shows your location. If you click on the small map, a larger map will appear. Click on the area you wish to visit. Click on the time counter for an explanation of geological time. To gain access to the **Backtrack**, **Help**, **Index**, and **Options** features, click on one of the arrows to flip the Navigator icon and the menu will drop down.



NATIONAL CURRICULUM

Geography This CD-ROM will greatly aid students' understanding of tectonic and geomorphological processes. There are many devices to enable children to explore volcanic activity, earthquakes, and a range of land formations, all of which are accompanied by detailed explanations.

Science Students can study the formation of igneous, metamorphic, and sedimentary rocks, as well as eight groups of minerals, and extra-terrestrial rocks. They can also look at samples to discover their properties and classification.

YOUR STARTER FOR TEN

- 1 What are the oldest rocks in the world and how old are they?
 - 2 What is a seismograph?
 - 3 What is the Ring of Fire?
 - 4 What is the difference between a metamorphic rock and an igneous rock?
 - 5 Which was the biggest volcanic eruption in history?
- Children may enjoy making up their own quiz or board game using questions they devise for themselves. If they do this, they should keep the questions quite simple.

